<u>REMARKS</u>

The Office Action which was mailed February 28, 2007 has been carefully considered by the Applicants. As explained below it is believed that the pending claims all comply with the written description requirement of 35 U.S.C. §112 first paragraph.

We first note that the claims are directed to those of skill in the art who are familiar with the specification and figures of the application. Additionally, it's well recognized that the claims need not literally replicate the wording of the specification which is used in the description of the invention. What is required is that this specification and figures, when read together, describe the invention to those of skill in the art.

As previously explained and held by the Federal Circuit:

"The **specification** as originally filed must convey clearly to those skilled in the art the information that the applicant has invented the specific subject matter later **claimed**...In deciding the issue, the **specification** as a whole must be considered...the "claimed subject matter need **not** be described *in haec verba* [in those words] in the specification to satisfy the description requirement." The fact therefore that the exact **words** here in question [in the claim] ...are **not** in the specification is **not** important." *In re Wright* 866 F.2d 422, 424 (Fed. Cir., 1989) citing with approval *In re Smith*, 481 F.2d 910, 914 (CCPA 1973) emphasis in original

The claims in question, 20, 30, 33 and 36 and related dependent claims are directed to methods and systems for carrying out connection control. Connection control in the context of the present invention is initially described on page 9 of the pending application, last paragraph (page 3, numbered paragraph 19 of the published application) which states:

"In an alternative embodiment a connection admission control method for use in a communication network is provided. The method provides for the receipt of a request for communication connection. The bandwidth needed for the requested communication and the maximum additional spare bandwidth needed is determined and the sum of the two is compared to the available

bandwidth for each of the links. If sufficient bandwidth for each of the links is available, the communication request is accepted."

Connection admission control is described in the context of ring based communication networks; see FIGS. 1a-1c as well as 12a, 12b. Such networks include one or more nodes which can be implemented as add drop multiplexers which have at least first and second ports for the ingress or egress of communication signals to or from respective links in the system, as illustrated in FIG. 1a.

Connection admission control processing, and related apparatus relative to a first embodiment, is expressly described, starting on page 25 first full paragraph, extending to page 28 end of first full paragraph of the pending application (numbered page 6 of the published application starting at paragraph 55 thereof and extending to the beginning of paragraph 63 on page 7 of the published application.)

A second embodiment of a connection admission control process is described in detail starting on page 25 second full paragraph to page 31, second line thereof of the pending application (page 7 of the published application paragraph 64 thereof and extending through the beginning of paragraph 78 on page 8 of the published application.) Processing methodology in the context of ring based communication systems is discussed in detail relative to the two described embodiments in the respective sections noted above.

More particularly, with respect to various of the claims rejected by the Office Action, at least the following sections describe method claim 30.

For example, relative to the limitation "evaluating bandwidth required for a proposed connection" the text of the pending application page 12 line 2 through page 17 first full paragraph (published application starting on page 3 numbered paragraphs 27 through at least numbered paragraph 40 on page 4) describes to one of skill in the art the process of "evaluating bandwidth required for a proposed connection." The second limitation "evaluating bandwidth required for working in protection traffic on the ring in at least one failure situation" is described to those of skill in the art starting on page 25 last three lines through page 27 equation (9) of the pending application (page 6 of the published application,

numbered paragraph 56 through page 7 of the published application numbered paragraph 58.) In particular, included in the above noted text is the following:

"Let R(ij) represent the required capacity needed on a link of span i given a failure at span j."

Subsequent text describes further the processing associated with evaluating such capacity. Finally, the limitation "accepting the proposed connection only the presence of adequate excess capacity to support same it in at least one failure situation" is described in page 27 first line through equation (10) of the pending application (the last two lines of numbered paragraph 58 of the published application and through numbered paragraph 59 thereof.)

Subsequently, in discussing the alternate embodiment of connection admission control page 29 first full paragraph through page 30, down to "Step2" of the pending application (paragraphs 66-73 on page 7 of the published application) describe in detail the limitations of claim 30 requiring "evaluating bandwidth required for a proposed connection; evaluating bandwidth . . . one failure situation;". The final limitation of claim 30 for accepting the proposed connection . . ." is described on page 30 in the two lines starting at "Step 2" (numbered paragraph 74 of page 7 of the published application.) Additional description of found in last 5 lines of page 30 through top two lines of page 31 of the pending application (numbered paragraph 76 and 77 on page 8 of the published application.)

Relative to apparatus claim 33, as noted in the last paragraph of page 27 of the pending application (numbered paragraph 61 of the published application):

"The CAC method for minimizing spare bandwidth can be implemented in a centralized or distributed fashion at the systems such as add drop multiplexers (ADMs), disposed at the ring nodes. Each node should have the knowledge of all spans traversed by a simplex connection."

The above noted paragraph describes to one of skill in the art how an "apparatus for accepting a proposed connection only in the presence of adequate bandwidth notwithstanding at least one failure of one of the paths" (pending claim 33) would implement the connection

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admission control method described starting on page 25 first full paragraph through page 27 second full paragraph of the pending application (numbered page 6 of the published application paragraph 55 through the end of paragraph 60 on page 7 of the published application.)

Similarly, the alternate form of carrying out connection admission control describes to one of skill in the art starting on page 29 second full paragraph through top two lines of page 31 of the pending application (numbered paragraph 67 page 7 of published application through the end of numbered paragraph 77 thereof) methodology which "can be implemented in a centralized or distributed fashion at the systems such as add drop multiplexers (ADM), disposed at the ring nodes.", page 27 last full paragraph of the pending application (numbered paragraph 61 published application).

Similar comments apply to device claim 36. We first note that the FIGS. 1a-1c as well as 12a, 12b disclose to those of skill in the art:

> "at least a first pair of ports for ingress and egress of communication signals from perspective links in the system; add drop processing structures coupled to the ports for adding and dropping communications association with the links;"

The last limitation of claim 36 namely "a connection evaluator coupled to the structures . . . . and if a link fails" is described in connection with a first embodiment starting at page 25 first full paragraph through page 28 first full paragraph (numbered paragraph 55, page 6 of the published application through numbered paragraph 62 on page 7 of the published application.) The functionality of the quoted structure is also described relative to the alternate form of processing between page 29 first full paragraph through page 30 to fifth line from bottom of the page of the pending application (between paragraphs 66 and the end of paragraph 75, page 7 of the published application.

Relative to pending claim 20, we first note that pending claim 20 is described in an overall sense in the second full paragraph of page 9 of the pending application (numbered paragraph 19 of the published application) namely:

> "In an alternative embodiment a connection admission control method for use in a communication network is provided. The method provides for the receipt of a request for communication connection. The bandwidth needed for the requested communication and the maximum additional spare bandwidth needed is determined and the sum of the two is compared to the available bandwidth for each of the links. If sufficient bandwidth for each of the links is available, the communication request is accepted."

Additionally, the limitations of claim 20 requiring "determining the bandwidth needed . . . determining the maximum additional spare band with needed . . . of a single link failure" are described to those of skill in the art for a first embodiment of connection and admission control starting at page 25 first full paragraph through page 27 equation (9) of the pending application (numbered paragraph 55 page 6 of the published application through numbered paragraph 58 of page 7.) The "comparing the sum of . . . limitation of claim 20 is set forth by the relationship in the top four lines of page 27 of the pending application (the last 2 lines of numbered paragraph 58, page 7 of the published application.) Finally, the "accepting the communication connection request . . ." limitation is described by the top 5 lines of page 27 of the pending application (last two lines of numbered paragraph 58 and the first line of numbered paragraph 59 of the published application)

> "A connection is accepted if, after the update in equation (8),
>
> $R(i,j) < L$ for all i,j
>
> A connection is rejected if this condition is not met."

The limitations of claim 20 are also described for those of skill in the art for the alternate embodiment starting at page 28 last five lines through page 30, fifth line from the bottom of the page of the pending application (numbered paragraph 65, page 7 of the published application through the end of numbered paragraph 75 of that page.)
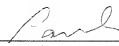
Finally, applicants had filed an Information Disclosure Statement that was received at the Patent Office on Feb. 26, 2004. It is requested that the various documents identified thereby be noted and cited relative to the present application. If the original document is missing from the Office file, applicants will submit a replacement.

Thus for at least the above reasons, the pending claims do comply with the written description requirement. Allowance of the application is respectfully requested.

Respectfully submitted,

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